

2SA1185

Silicon PNP Epitaxial Planar Type

High Power Amplifiers

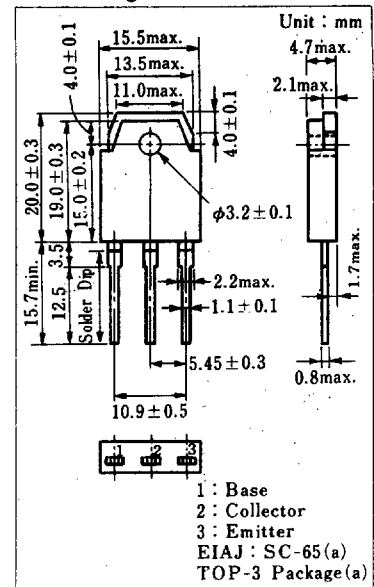
■ Features

- Low collector-emitter saturation voltage ($V_{CE(sat)}$)
- Good linearity of DC current gain (h_{FE})
- Large collector current

■ Absolute Maximum Ratings ($T_c=25^\circ\text{C}$)

Item	Symbol	Value	Unit
Collector-base voltage	V_{CBO}	-50	V
Collector-emitter voltage	V_{CEO}	-50	V
Emitter-base voltage	V_{EBO}	-5	V
Peak collector current	I_{CP}	-15	A
Collector current	I_C	-7	A
Peak base current	I_{BP}	-5	A
Collector power dissipation	$T_c=25^\circ\text{C}$	60	W
	$T_a=25^\circ\text{C}$	2.5	
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 ~ +150	$^\circ\text{C}$

■ Package Dimensions

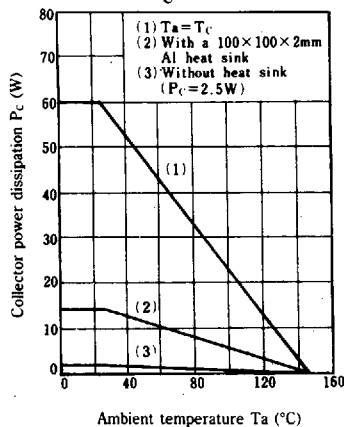
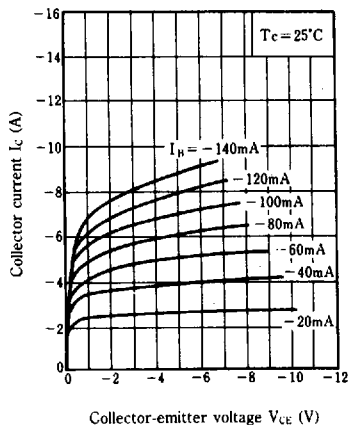
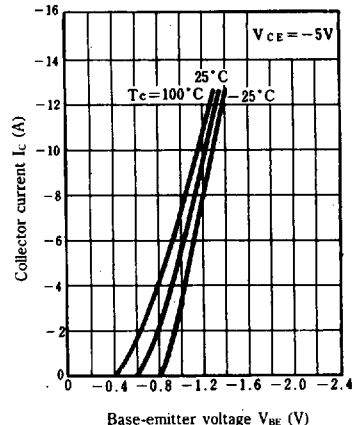
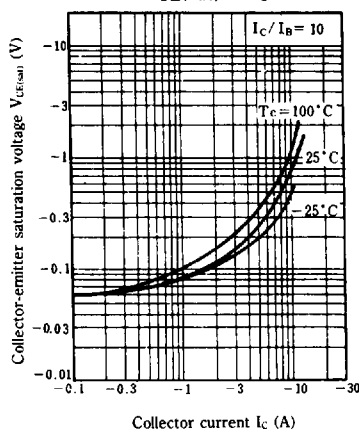
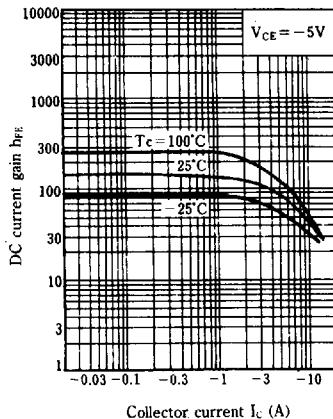
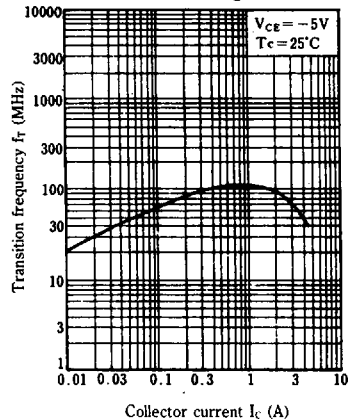


■ Electrical Characteristics ($T_c=25^\circ\text{C}$)

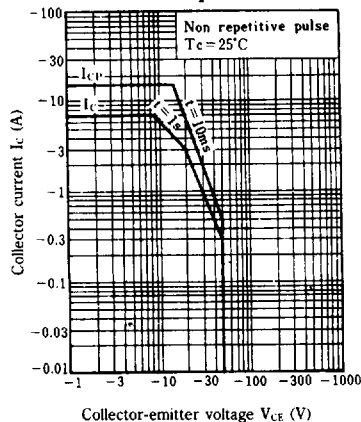
Item	Symbol	Condition	min.	typ.	max.	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = -50\text{ V}, I_E = 0$			-1	mA
Emitter cutoff current	I_{EBO}	$V_{EB} = 5\text{ V}, I_C = 0$			-2	mA
Collector-emitter voltage	V_{CEO}	$I_C = -100\text{ mA}, I_B = 0$	-50			V
DC current gain	h_{FE1}^*	$V_{CE} = -5\text{ V}, I_C = 1\text{ A}$	60		320	
	h_{FE2}	$V_{CE} = -5\text{ V}, I_C = -7\text{ A}$	20			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -7\text{ A}, I_B = -0.7\text{ A}$			-0.8	V
Base-emitter saturation voltage	V_{BE}	$V_{CE} = -5\text{ V}, I_C = -7\text{ A}$			-1.5	V
Transition frequency	f_T	$V_{CE} = -5\text{ V}, I_C = -0.5\text{ A}, f = 10\text{ MHz}$		100		MHz
Collector output capacitance	C_{ob}	$V_{CB} = -10\text{ V}, I_E = 0, f = 1\text{ MHz}$		250		pF

* h_{FE1} Classifications

Class	Q	P	O
h_{FE1}	60 ~ 120	100 ~ 200	160 ~ 320

$P_C - T_a$  $I_C - V_{CE}$  $I_C - V_{BE}$  $V_{CE(sat)} - I_C$  $h_{FE} - I_C$  $f_T - I_C$ 

Area of safe operation (ASO)

 $R_{th(t)} - t$ 